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#### How to cite:

Thomas, Rhodri (2010). Open Mobile: institutional responses to mobile learner support. In: mLearn2010 Conference, 19-22 Oct 2010, Malta.

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Version: Version of Record

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# Open Mobile: institutional responses to mobile learner support

Rhodri Thomas

The Open University, Walton Hall, Milton Keynes, UK

Rhodri.Thomas@open.ac.uk

## Abstract

This poster will outline some of the steps that The Open University is taking in providing a range of learning services and materials to an increasingly mobile-aware student body. In particular, providing a mobile VLE or LMS through customised Moodle templates and modules will be illustrated, alongside more subject-specific content packages and applications. Further enhancements and interventions are listed, where the university is adopting strategic cross-institutional solutions to work with our mobile learners in addition to subject-specific trials and pilots.

## Keywords

MobileVLE, apps, eBooks, eAssessment, strategy, mainstreaming

## 1. INTRODUCTION

For some time, The Open University in the UK (OU) has been involved in exploring uses of mobile devices' standard features or customised applications to aid in teaching and learning (Kukulski-Hulme & Traxler, 2005). For a distance-learning organisation, the challenges in use of mobiles are not the same as for face-to-face, not least through irregular contact time, familiarisation and in-person support - either with peers or with specialists. The primary aim for the OU is to enable students to make best use of most familiar (mobile) technologies, rather than dictating a particular solution. We also keep track of usage and platforms, and have tracked mobile device accesses to the main StudentHome portal since 2006 (Figure 1).

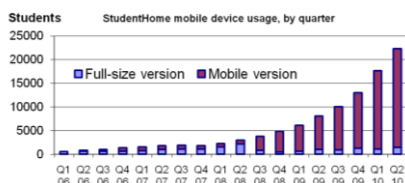


Figure 1: StudentHome mobile usage

Quarter upon quarter, mobile usage has been growing to about 22K individual accesses. Also once device detection was put in place in mid-2008, most users continued to be happy to take advantage of a stripped-down mobile-optimised version of the portal. The numbers are significant enough for the university to respond in a more strategic way, beyond smaller-scale trials and pilots. The remainder of the poster will illustrate a few examples of recent work.

## 2. RECENT WORK

### 2.1 Mobile VLE

To respond to the existing student usage of mobile technologies, a self-selecting group of 196 StudentHome mobile users were surveyed in Summer 2009 (Thomas, 2010) to gain insight into their use of devices and to set

priority areas for development work. Specific questions were asked as to the kind of learning tasks or activities students would expect or prefer to undertake while mobile, taking account of pre-planned or unanticipated free time. Providing better access to updates and online activities as well as resources while mobile (and keeping parity with desktop access) was seen to be the most important factor.

As a result of the survey feedback, a roadmap (Figure 2) was put in place to deliver the following priority areas for development: Assessment; Messages; Tasks; Planner; Resources; Calendar; Search; Glossary; Objectives (Mobile Learner Support, 2010).



Figure 2: Mobile VLE Roadmap

The screenshots included in the poster show a few of the content and collaborative tools now made usable on mobile devices - as device-independent as possible, but mainly targetted at the largest 'mobile WebKit' browser class such as those found in iOS and Android, with similar success in use of Opera Mini on other mobile phones.

StudentHome mobile users will again be surveyed to gauge the effectiveness of these solutions, also to inform further development work in 2010/2011. While most work has now been completed for v1.9x of the OU customised version of Moodle and modules, the OU is also moving into a new development phase with Moodle v2.x and will be able to share more with the community during 2011.

### 2.2 Mobile apps

There are of course cases where more customised approaches are more favourable. In particular, being able to access content using rich media and interactivity requires native device development or use of a standard formats and helper applications, in addition to website functionality.

In order to achieve offline access and more flexible usage of multimedia-rich content, the OU has invested in creating a podcasting service. It is the same infrastructure that drives some of our public resources in iTunes U (Knowledge Media Institute, 2010) or YouTube. There is increasing evidence that more and more users are now 'sideloading' podcasted content to devices or downloading 'over-the-air' rather than the previous desktop consumption model.

Building on the capabilities of iOS and Android devices have allowed the OU to prototype a number of multimedia

and interactive apps - which cater for subject-specific content in standard frameworks and effectively a number of linked learning objects (Mobile Innovations Group, 2010). At the same time, other developments have taken place to enhance eBook formats in line with Apple (ePub) and Kindle (mobi) updates, as well as a pipeline system to take structured content in XML and output alternative formats.

One particular prototype concerned taking the standard web-based output of our structured content course material and providing a version that can be electively downloaded to a student's device for use offline or when connectivity is intermittent. Unique features of this app were that the student can sign in to the app - which then handles authentication, permissions and then verify if content packages are available to download. The native feature of the app is in playing multimedia content and how interactions or gestures are mapped to actions. Screenshots will be included in the poster.

While UK HEIs may not yet be as prevalent as their US counterparts in the mobile app space, development of mobile apps - large and small - is firmly on our roadmap.

### 2.3 Mobile optimization, and alternates

A substantial part of internal work has gone in to better enabling our learning systems to support our students who are mobile, but there are also initiatives where mobile methods have crossed-over and supported other activities.

A recent example is the use of mobiles in eAssessment. Through partnership with Learnosity (Cooney, 2010), a mobile languages project was undertaken in 2009 to evaluate student response to engaging in different ways with some oral and aural exercises. Formative, self-paced activities were chosen from mostly pre-existing DVD-ROM based content. The adoption of the use of a phone-based system allowed for a more authentic experience modelling a more realistic conversational interaction.

This particular example explored the mobile dimension specifically, and as a consequence the number of ways that a student could interact grew to cover web-based, Voice Response via phone, Skype, mobile - both using a voice call and iOS app. Work is now underway to establish these methods within tutor assessed work and to explore different contexts with a mainstreaming aim in mind. The extension of this kind of activity so that mobile is just one facet of eAssessment has resulted in greater acceptance among staff, many of whom hadn't engaged in the mobile arena.

Likewise, one area where attempts to use mobile learning approaches in user-generated content was through use of MMS texts to contribute content to be shared with others via an online service. (Needham & Ally, 2008) This ultimately did not prove sufficiently consistent and scaleable, and relied heavily on continual update and filtering of the MMS messages to remove advertising and transcoding many media formats. Future work in this area will concentrate around using cloud-based services as an intermediary, building on third-party mobile integration.

The OU then needs to enable the students to manage and share their content online and via mobile-optimised routes.

## 3. CONCLUSION

In developing more appropriate mobile learning solutions and services, it is essential that the students are consulted in establishing a strategic roadmap - so that even if design and general operation of mobile-optimised websites were largely unaltered, some useful reprioritisation took place. Taking regular and careful note of the mobile users - both in terms of demographic and technology has also informed the kind of work we undertake, particularly with regard to mobile apps. Finally, ensuring that there are alternative approaches to core activities is key to wider adoption and mainstreaming, which can then lead to more users seeing that mobile solutions are available and work equally well for when they are ready to join in. There will, of course, be specific mobile learning activities that take place in the future, which challenge a distance-learning environment, but can take place if a group is sufficiently well known, similarly equipped, or can be mediated face-to-face.

## 4. ACKNOWLEDGMENTS

The mobile learning practitioners & community at the OU – <http://www.open.ac.uk/mobisite>

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